

**AMENDMENT**

**U.S. Appln. No. 09/741,673**

**GB000057**

and first and second clamp diodes arranged in series with the same polarity between said clamp terminals; and isolation means between each input line and said common output, wherein each input line is connected to the isolation means and to a point between said first and second clamp diodes, and wherein said diode clamp operates in a first mode in which voltages are applied to the clamp terminals such that said diodes of said diode clamp are forward biased and hold a first voltage that prevents the passage of current from said input line to said common output, and a second mode in which said diodes of said diode clamp are reverse biased allowing for the passage of a current from said input line to said common output, said multiplexer circuit couples said column conductors of said respective groups to said respective common output; and

*C2*

a charge measurement device that measures a flow of charge from said common output.

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**REMARKS**

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

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**SUMMARY OF THE REJECTIONS:**

Claims 1-10 and 14-15 stand rejected under 35 USC § 102 as being anticipated by Bird (U.S. Patent No. 5,721,422; hereinafter "Bird").

Claims 11-13 were indicated as allowable if rewritten in independent form.

**RESPONSE TO REJECTIONS:**

In view of the above amendments, it is respectfully submitted that Bird does not anticipate independent claims 1 and 6 at least as this reference fails to show that each respective input line is connected to an isolation means and to a point between a first and a second clamp diode, as recited in these claims.

The Office Action states that elements S1 and S2 (in Fig. 1) of Bird show a diode clamp, elements 21a and 21b show respective input lines and that element 8 shows an isolation means. However, as seen in Fig. 1 of Bird, element 21a (or 21b) is not connected to a point between elements S1 and S2 (of pixel 10a) and to element 8.

The Court of Appeals for the Federal Circuit held in *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987):

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A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

**CONCLUSION**

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Should the Examiner deem that there are any issues which may be best resolved by telephone communication, he is respectfully requested to telephone Applicant's undersigned Attorney at the number listed below.

Respectfully submitted,  
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Date: 1/13/03

  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: N. BIRD GB 000057  
SERIAL NO.: 09/741,673 EXAMINER: L. NGUYEN  
FILED: December 19, 2000 ART UNIT: 2816  
FOR: DIODE MULTIPLEXER CIRCUIT AND ELECTRONIC DEVICE  
INCORPORATING THE SAME

VERSION WITH MARKINGS SHOWING CHANGES MADE

Assistant Commissioner for Patents  
Washington, DC 20231

Dear Sir:

In response to the Office Action dated November 18, 2002, the Applicant requests amendment of the above-identified application as follows:

IN THE CLAIMS:

1. (Amended) A multiplexer circuit for switching a selected one of a plurality of current inputs carried by respective input lines to a common output, said circuit comprising, for each input line:

    a diode clamp comprising including first and second clamp terminals and first and second clamp diodes arranged in series with the same polarity between said clamp terminals; and  
    isolation means provided between each input line and said

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common output,

wherein each input line is connected to the isolation means  
and to a point between said first and second clamp diodes, and

wherein said diode clamp is operable in two modes, a first mode in which voltages are applied to said clamp terminals such that said diodes of said diode clamp are forward biased and hold said input line at a first voltage which prevents a passage of current from said input line to said common output, and a second mode in which the voltages are applied to said clamp terminals such that said diodes of said diode clamp are reverse biased and said passage of said current from said input line to said common output is allowed.

6. (Amended) An electric device comprising:

an array of charge storage elements that are arranged in rows and columns and which are coupled to row and column conductors, said column conductors being arranged in at least one group, each group having a respective common output;

a multiplexer circuit for switching a selected one of a plurality of current inputs carried by respective input lines to said common output, said multiplexer circuit having, for each input line, a diode clamp with first and second clamp terminals and first and second clamp diodes arranged in series with the same polarity between said clamp terminals; and isolation means between each input line and said common output, wherein each input line is connected to the isolation means and to a point between said first and second clamp diodes, and wherein said diode clamp operates in a first mode in which voltages are applied to the clamp terminals such that said diodes of said

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diode clamp are forward biased and hold a first voltage that prevents the passage of current from said input line to said common output, and a second mode in which said diodes of said diode clamp are reverse biased allowing for the passage of a current from said input line to said common output, said multiplexer circuit couples said column conductors of said respective groups to said respective common output; and

a charge measurement device that measures a flow of charge from said common output.